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TAGS: [ENRG](#) [ETRD](#) [IN](#) [KNNP](#) [PREL](#) [IAEA](#) [US](#)  
SUBJECT: THE US-INDIA NUCLEAR DEAL: SHAPING PUBLIC OPINION

REF: A. NEW DELHI 5680  
[1](#)B. NEW DELHI 5879  
[1](#)C. NEW DELHI 6011  
[1](#)D. NEW DELHI 6079  
[1](#)E. NEW DELHI 4793

Classified By: SCI-COUNS M. DICAPUA FOR REASONS 1.5 (B) and (D)

[1](#)1. (C) Summary: Prime Minister Singh,s appearances before Parliament (Ref. A, B and C) and our contacts in the Indian scientific community allow an early assessment of how the GOI interprets the July 18 Joint Statement (JS) on civil nuclear cooperation and where challenges are likely to arise in implementation. The PM views the nuclear deal as an opportunity to achieve energy security while preserving India,s nuclear strategic options. The separation of civilian and military activities within the nuclear establishment, the risk that the agreement may bring India,s quest for nuclear self-sufficiency to an abrupt end, a shortage of fuel for the current civilian program, and the massive investment in an ambitious nuclear program are the issues that the PM, members of Parliament, and analysts have brought up. There is the distinct possibility that the Prime Minister will announce attainment of full power of operation of Tarapur-4 on August 15th, India's Independence Day. In keeping with the Joint Statement issued by the President and Prime Minister, it will be important for USG officials to emphasize that the US and India will implement the agreement in a phased and reciprocal manner. End Summary.

India,s Parliamentary Nuclear Debate  
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[1](#)2. (C) PM Singh told the Lok Sabha (LS, Lower House of Parliament) on July 29 (Ref. B) that India desires to &attain energy security to enable us to leapfrog stages of economic development obtained at the least possible cost.8 Singh said that nothing in the JS limits India's strategic nuclear weapons program and assured Parliament that India retains complete and autonomous control. Thus, Singh rejected criticism that the JS would fatally constrain India,s strategic options.

[1](#)3. (C) Singh further assured the LS on August 3, 2005 that the GOI will &Not allow any fissile material shortages or any other material limitations on India,s strategic programs in order to meet current or future requirements." Singh reaffirmed India's commitment to the three-stage nuclear power program consisting of Pressurized Heavy Water Reactors (PHWRs), fast breeder reactors and thorium reactors.8 <http://pmindia.nic.in/lspeech.asp?id=155>

India,s Uranium Supplies Place India in a Tight Corner  
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14. (C) The public debate on the JS has brought the shortage of natural uranium for India's nuclear power program out in the open. One expert, M. R. Srinivasan, says that the high operating factors the Nuclear Power Corporation of India Limited (NPCIL) achieved last year are starting to decline because of inadequate supplies of natural uranium.

15. (U) According to another nuclear expert and strategic analyst, G. Balachandran, the poor quality uranium ore at Jaduguda in Jharkhand is close to exhaustion. Mining operations in the Nalgonda District of Andhra Pradesh and Domiasiat at Meghalaya have not begun due to electoral sensitivities and NGO agitation. R. Ramachandran, reports in Frontline (12 August 2005) that the Planning Commission, in its mid-term appraisal, states that the development of uranium mines in India has not kept pace with the addition of generating capacity.

16. (SBU) In agreement with Srinivasan, Ramachandran says that the capacity factor of operating nuclear plants is being lowered by as much as 10 percent because there may not be sufficient fuel to upload four plants that are coming on line (RAPS 5 and 6 and Kaiga 3 and 4). Our contact at the Atomic Energy Regulatory Board (AERB) has confirmed that NPCIL is now attempting to recycle fuel through several twin-unit

reactors to sustain optimal operation in a fuel-scarce environment.

17. (U) Even Anil Kakodkar, the Chairman of the Department of Atomic Energy (DAE), told the Energy Coordination Committee (ECC) at its first meeting on August 6 that domestically mined uranium is four to five times more expensive than uranium in world markets. According to press reports, Kakodkar (Hindustan Times, 7 August 2005) made a special reference to the recent Indo-US JS that would enable India to import the uranium it requires for nuclear power projects.

#### PM Singh Owns Up to Shortcomings of Nuclear Program

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18. (U) In his Rajya Sabha (RS, Upper House of Parliament) address, PM Singh stated, &I was a Member of the Atomic Energy Commission, when I was Secretary in the Ministry of Finance, way back in 1970. At that time, we had prepared a plan to reach the target of 10,000 Megawatt for nuclear capacity. We are today 30 years away from that period. Our total capacity is about 3,000 Megawatt. In the next five or six years, it can at best rise to about 6,000 Megawatt. But, even for these, we do not have fuels. We have problems in mining uranium in the areas where domestic deposits are found. As far as imported fuel is concerned, once again, because of the restrictive international regime, which the United States and other countries have erected, we are not able to access those sources or supplies.8

#### Reciprocal Cooperation Paramount in its Implementation

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19. (C) Singh, in his 29 July LS address said, &Reciprocity is key to the implementation of all the steps enumerated in the JS. We expect a close co-relation between the actions to be taken at appropriate points in time, consistent with our national security interests... Hence phased action, in terms of identification and separation of civilian nuclear facilities based solely on our own duly calibrated national decisions will be taken at appropriate points in time, consistent with our national security interests.8

110. (C) In the 04 August RS debate, PM Singh said, &The separation of civilian and military nuclear facilities, I have been told by our nuclear establishment, can be done. I have not studied the details, but competent observers have told me that the Father of India's Nuclear Program, Dr. Raja Ramanna, himself had proposed, long ago, that such a division should be made. Our nuclear establishment has told me that this can be done, but it will have to be done in a phased manner. And, therefore, we put it to the US Government that this separation will be done in a phased manner. It will be an autonomous Indian decision as to what is 'civilian' and what is 'military.' Nobody outside will tell us what is 'civilian' and what is 'military'.8

111. (C) Feasibility notwithstanding, the GOI will have to meet the tangible and intangible costs associated with the separation efforts. According to Balachandran, the tangible costs arise from the need to establish separate facilities for civil and military purposes where, at present, one or more facilities may have been engaged in both types of work. A similar issue arises with human resources where currently there may be technical personnel who may be engaged in both types of activities. There are also intangible costs associated with delays that separation-of-facilities will be in programs already underway.

#### Separation of Nuclear Facilities

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12. (C) Balachandran envisions that the Indian commitment to separate its nuclear facilities and programs into civil and military programs, and putting civilian facilities under IAEA safeguards could be contentious in India and a time consuming aspect of the JS.

13. (C) Balachandran predicted that the CIRUS and Dhruva reactors, as well as the Rare Materials Project at Mysore

will most likely fall in the military category as they provide the basic fissile material for India's weapons program.

14. (C) According to Balachandran, civil facilities easily identified are the Atomic Minerals Directorate (AMD), the Variable Energy Cyclotron Center (VECC), and the Center for Advanced Technology (CAT), the various grant-in-aid institutions maintained by DAE such as the Tata Institute of Fundamental Research (TIFR), and the Tata Memorial Center. The civilian list will likely include the two corporations involved in the construction and operation of nuclear power plants, NPCIL and BHAVINI, the consortium that is building the Fast Breeder Test Reactor. The Electronics Corporation of India Ltd. (ECIL), the Indian Rare Earth Ltd. and the Board of Radiation and Isotope Technology are outside the purview of safeguards and thus do not represent a problem. Others, such as the Radiation Medicine Center, the Beryllium Plant and the Low Radiation Research Laboratory at Kollam are also civil in nature.

#### Some Components Will Present a Challenge

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15. (C) According to Balachandran, three industrial facilities with both military and civilian components are the Uranium Corporation of India Ltd., the Heavy Water Board (HWB), and the Nuclear Fuel Complex (NFC). Among these, Balachandran considers that only some of the component facilities of these entities may have to be declared as military.

16. (C) The HWB operates seven out of India's eight heavy water plants. Depending on requirements, only two of these plants may need to come under the umbrella of military facilities while others designated as civilian, with end-users being nuclear power plants.

17. (C) There are three reprocessing plants in operation, at Trombay, Tarapur and Kalpakkam. Balachandran says that any one of these can be designated as military and the remainder as civilian without adversely impacting the accumulation of fissile material for strategic purposes.

18. (C) One would be led to think that NFC can present problems in separation of military and civilian facilities. However, the NFC, even though not under full facility safeguards, has come under activity specific safeguards when it has been engaged in fabrication of fuel rods from safeguarded imported enriched uranium fuel for the existing Tarapur nuclear power plant.

19. (C) The Bhabha Atomic Research Center (BARC) and its constituent establishments are engaged in both civil and military programs. Thus, it will be the separation at the main BARC premises at Trombay that will require some institutional and location rearrangement. As BARC is the cradle of India's nuclear program, separation of military and civilian activities at BARC may present the biggest challenge as programs and personnel there are heavily intertwined, according to Balachandran.

#### How to Deal with the Fast Breeder Reactor Program

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20. (C) Indian nuclear scientists argue whether India will be able to continue development of the fast breeder reactor (Ref. E) and thorium fuel cycle if IAEA's intrusive inspections are put in place. Should India choose the option to place the Prototype Fast Breeder Reactor (PFBR) program under IAEA safeguards, this program, which is a critical element leading to India's civilian fissile material self-sufficiency, would stand to benefit the most from international cooperation. According to Balachandran, however, putting the breeder reactor with its plutonium in place under safeguards would remove a substantial amount of currently unsafeguarded plutonium from weapon's program access. In a second more farfetched option, India could offer to place the breeder reactor under safeguards, and fuel it with safeguarded plutonium brought from abroad. In this

scheme, India would get to retain the stock of unsafeguarded plutonium for its weapon's program. In a third option, India would place the breeder program in the military category. This could cause problems downstream when the time comes to

negotiate and implement a Fissile Materials Cut-off Treaty (FMCT).

¶21. (C) Balachandran told us that the PM,s commitment to the continuity of India,s breeder program is a political imperative. Otherwise, critics may point out that the JS could become a backdoor approach to bring India's three stage civil nuclear program to an end. (Comment: The breeder program, which has yet to deliver its promise of unlimited supplies of U233 for the civilian nuclear power program was first formulated by the Indian nuclear pioneer, Homi Bhabha, in 1944 and formally adopted in 1958. India has been obsessive about the breeder program since, thus the PM commitment to it in paragraph 3. End comment.)

#### Power Projections in India

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¶22. (C) Some analysts say that India may look to global giants in nuclear power and investment to meet energy requirements. The 10th Plan Mid Term Appraisal Document states that &India must seek at least 20,000 MW of additional nuclear power capacity on a turn key basis, based on a competitive power tariff, to be built over the next 10 to 12 years.8 Thus, some industry analysts hope that the JS will become the catalyst to attract Foreign Direct Investment (FDI) in India,s nuclear power sector.

¶23. (C) Srinivasan provided a projection of India,s energy requirements in 2052. He indicated that the total installed capacity will have to be about 1350 GW and total output of 8000 TW hours, which is about ten times India's installed capacity (139 GW) and output (640 TW hours) in 2002, which includes captive capacity. In this scenario, the nuclear component would have to rise from the current three percent to about 26 percent with an installed capacity of 275 GW, about 100 times the present operating capacity. If one were to look at 275 GW of nuclear power by 2052 at a current price of \$1.2 billion per GW for Indian pressurized heavy water reactor units, this implies a staggering investment of \$330 billion. In his Rajya Sabha address, PM Singh pointed to an initial investment required for infrastructure of \$150 billion in the next five years.

¶24. (C) Some analysts have gone so far as to say that the nuclear sector should emulate the oil sector and begin to look for resources abroad. In this scenario, India ought to look for opportunities to acquire sites where it could undertake uranium mining either through sole or joint investment. In their view, these options will be the only chance India will have to lay the groundwork for growth and self-sufficiency of its nuclear industry.

#### The Role of the Private Sector

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¶25. (U) There has been talk in the press about a possible role of the private sector in nuclear power generation in India. On August 4, according to press reports, (Business Standard, 6-7 August 2005), the Chairman of Tata Power, Ratan Tata, said that his company was ready to foray into this area "if and when the government allowed it." As Tata had a ringside seat during the Washington visit of PM Singh where the JS was signed, it does not surprise us that he would be looking at nuclear power in Indian as an area for investment.

¶26. (U) An editorial in The Hindu Business Line (9 August 2005) rightly suggests that now that technology barriers have been overcome, the private sector could provide the financial and organizational energy to move this program at a faster pace. The editorial draws an analogy between the booming growth of the telecom sector which "landscape has changed unrecognizably in just ten years with energetic private sector participation." The idea of private sector participation in the nuclear energy field first surfaced in November 2004 when Reliance Energy indicated that it was

looking at the possibility of setting up nuclear power stations. Reliance officials in May also told EconCouns that Reliance wanted to invest in the nuclear energy sector if the GOI lifted restrictions.

¶27. (U) At this moment, we have yet to hear an official view on private investments in the nuclear sector. On August 6 and 7, the Business Standard reported that the GOI is not favorably inclined towards allowing the private sector to set up nuclear power plants in India at the moment. The report quotes a government official as saying "there has been a demand from the private sector, but there is no decision to change the present framework."

¶28. (U) Even the staid public sector thermal power companies are making noises about getting into the nuclear power generation business. According to the Hindustan Times (9 August 2005), the National Thermal Power Corporation of India Ltd (NTPC) Chairman C. P. Jain told the media that NTPC "as a

power company, we need to look at alternate sources of fuel, and nuclear power is definitely an area we are interested in getting into. But there is no immediate plan."

#### Hunt On for India's Nuclear Helmsman

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129. (U) A helmsman will be required to steer India through the critical period of selecting the facilities that will be part of the military program and those that will remain on the civilian side under safeguards. M.R. Srinivasan, in an Op-Ed in *The Hindu*, 02 August 2005, opines that there is a lot of work to be done in India and there are tough negotiations ahead with our international partners.<sup>8</sup> In his view, these negotiations cannot be left to diplomats and civil servants, and must be entrusted to acknowledged leaders in the nuclear field.<sup>8</sup>

#### Limited Options for Choice of Leader

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130. (U) According to Balachandran, there is no clear answer as to who India might choose to lead the challenging task of separating civilian and military nuclear facilities. The internal debate will likely involve the Cabinet Committee on Security, the National Security Advisory Board, the Atomic Energy Commission, or an ad-hoc body created for the task. While a leader will have to emerge to steer the process, in Balachandran's view, there is a shortage of nuclear experts who can sort the technological, economic, and political implications of decisions that JS implementation requires. Entities such as the Institute for Defense Studies and Analyses (IDSA) exist to elaborate the security rationale for India's strategic programs. However they lack top leadership who can define overarching directions for research and analysis.

#### AEC Chairman Kakodkar Speaks For The Record

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131. (U) Atomic Energy Commission (AEC) Chairman Anil Kakodkar gave an interview for the record to *The Hindu* which appeared on 12 August 2005. In this interview, Kakodkar, who was part of PM Singh's delegation to the US said that:  
-- A massive uranium mining program is already underway at Banduhurang and Turamdih in Jharkhand.  
-- DAE is still pursuing the issue of uranium mining at Nalgonda with the Andhra Pradesh government and at Domiasiat with the Meghalaya government.  
-- India would reach the 10,000 MWe power level generation by 2012 with no qualification made on the availability of natural uranium to fuel the program.  
-- India would determine which facilities are civil and military "looking at the national requirements which exist from time to time. India's committed to this three-stage program which will continue according to plan."  
-- Growth in civilian nuclear power generation would rely on "external inputs as additionalities."  
-- The prototype fast breeder reactor will not come under safeguards but "when technology becomes mature, it is a different story."

-- Moreover, "any research and development program India has will not be put under safeguards and that includes the Indira Gandhi Centre for Atomic Research at Kalpakkam."

-- Decisions on imports of light water reactors will depend on the financial package offered by the vendors and by how much value addition to the projects can take place in India.

#### Comment: Skillful Leadership Has Kept the Debate Positive

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132. (C) The President's bold proposal to engage in nuclear cooperation with India following a series of phased reciprocal actions has engendered a lively public debate about the future of civil nuclear energy and the scope of India's nuclear weapons program. The foregoing analysis reflects the positive tone of the debate that the leadership of PM Singh (Ref. A) has channeled into productive directions notwithstanding some efforts to derail it (Ref. C and D). As both sides implement the proposed nuclear agreement, it will be crucial to continue to emphasize both publicly and privately the intention of each side to implement the agreement in a phased, reciprocal manner that will build confidence and confound the skeptics.

133. (C) Our Atomic Energy Regulatory Board (AERB) contacts told us that, as an Independence Day gift to the nation, the PM, on August 15, will announce that the Tarapur-4 reactor will have attained full power connection (540 MWe) to the grid. If, indeed, such an announcement takes place, it will be part of the PM's campaign to keep nuclear power very much in the public eye.

